STATE OF RHODE ISLAND

AND PROVIDENCE PLANTATIONS

DEPARTMENT OF HEALTH

Office of Drinking Water Quality

Safe and Healthy Lives in Safe and Healthy Communities

The Honorable Donald L. Carcieri, Governor
David R. Gifford, M.D., MPH, Director

Annual Compliance Report 2005

Office of Drinking Water Quality
June Swallow, PE, Chief
Contact List

Phone (401) 222-6867 Fax (401) 222-6953
Web Site: http://www.health.ri.gov

Topic	Staff Contact
Bacteria/Total Coliform Rule	Fred Kurdziel
Bottled Water	Bill Grant
Training and Outreach	Dana McCants Derisier
Consumer Confidence Reports	Dana McCants Derisier
Disinfection Byproducts	Doris Aschman, Sue Rabideau
Enforcement	Justin Blair
General Sampling Requirements	Fred Kurdziel
Inorganics	Fred Kurdziel
Inspections	Jim Scotland
Lead and Copper Rule	Clay Commons
Licensing	Clay Commons
Operator Certification	Dana McCants Derisier
Private Wells	Patrick Craft
Public Pools	Bill Grant
Radon/Radionuclides	Richard Amirault
Revolving Loan Fund	Gary Chobanian
Sample Collection Billing	Irene Cloutier
Source Water Protection	Clay Commons
Surface Water Treatment Rules	Doris Aschman, Sue Rabideau
Synthetic Organic Compounds	Fred Kurdziel
Treatment or Source Approval	Doris Aschman

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Copies of this information are also available upon request in braille, large print, audio cassette, and electronic file on computer disk. Contact the Department of Health, Office of Drinking Water Quality, 3 Capitol Hill, Providence, RI 02908, phone number 222-6867, or Relay RI (TDD) at 711.

OVERVIEW

The mission of the Department of Health is "***to prevent disease and to protect and promote the health and safety of the people of Rhode Island***." In carrying out this mission, the Office of Drinking Water Quality is responsible for ensuring the quality of the state's public drinking water supplies. The Office of Drinking Water Quality works closely with local water suppliers, other state and federal agencies, and various divisions within the Department of Health to ensure the safety of the state's drinking water. The Department of Health's Division of Laboratories, Office of Environmental Health Risk Assessment, Office of Occupational and Radiological Health, Division of Disease Prevention and Control, and the Office of Food Protection also play a role in ensuring the quality of the state's drinking water.

The Department of Health considers drinking water protection to be an essential and fundamental public health program.

This report was written to educate the public about the ways the Department of Health maintains and improves the quality of the state's drinking water and to highlight both the successes and challenges of the Department and local water suppliers in maintaining high-quality drinking water.

Public Drinking Water - 2005

The definition of a public water system is a system for the provision to the public of piped water for human consumption, provided such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Public water systems range in size from the Providence Water Supply Board, which serves about 500,000 residents, to small rural non-community transient systems, such as restaurants and convenience stores that utilize wells as their drinking water source. Fifty-six percent of the regulated water systems are food establishments with their own supply wells.

RHODE ISLAND DRINKING WATER FACTS

PERSONS SERVED BY PUBLIC WATER IN RHODE ISLAND	*1,055,290
Persons served by surface water systems	*564,089
Persons served by groundwater systems	*484,487
Number of public water systems in Rhode Island	483
Community Systems	85
Non-Transient Systems	76
Transient Systems	322
Number of systems using surface water	25
Number of systems using groundwater	**458

**Includes all populations, transient, residential, and workplace.*
***Some water systems use both ground and surface water (purchased/non-purchased).*

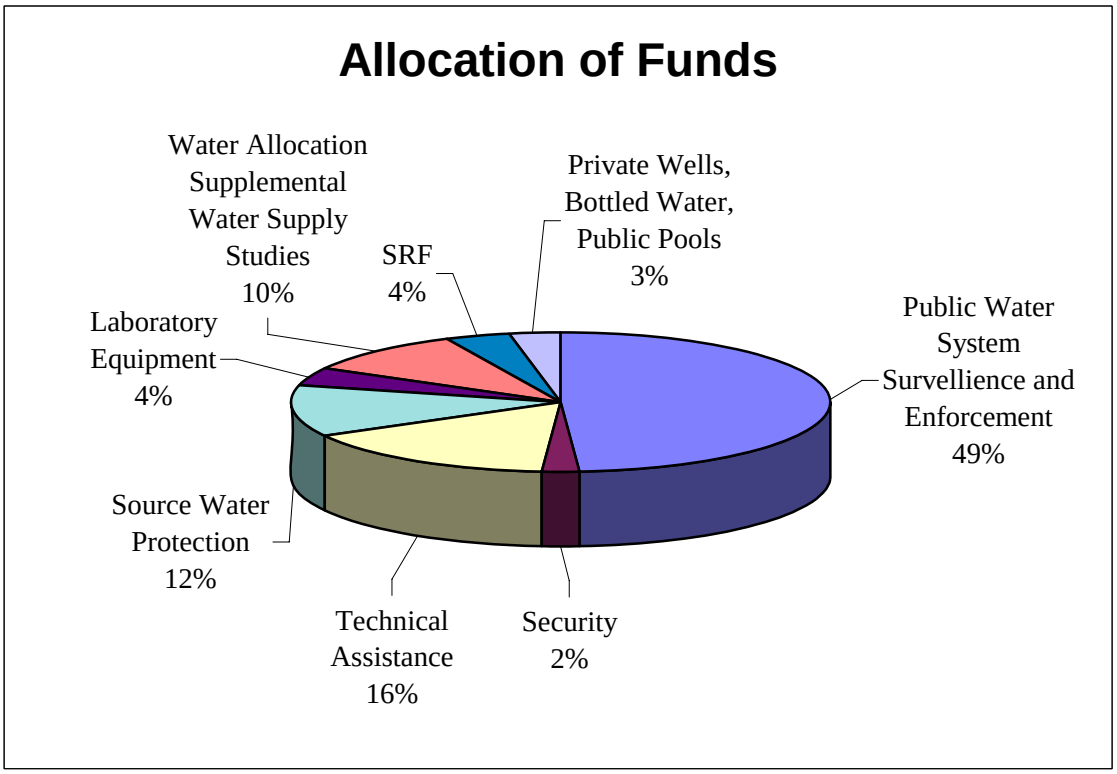
Table 1

Overall, the public water systems in Rhode Island have maintained a very good record of supplying high-quality, safe drinking water.

Program Budget

During 2005, the Office of Drinking Water Quality was staffed by 22 persons. The total budget for this office during this period was:

Federal Funding	$ 3,181,465
State Funding	460,458
Total Budget	$ 3,641,923



WATER QUALITY PROGRAMS

Ensuring the quality of the state's drinking water has placed many new demands on public drinking water systems. During 2005, the Office of Drinking Water Quality offered several programs to assist water systems with limited resources. We also continued to evaluate the sources of contamination and reasons for vulnerability of our drinking water supplies.

Counterterrorism Planning

The Office of Drinking Water Quality has been continuing to support utilities as they have made every effort to comply with the requirements of the *Public Health Security and Bioterrorism Preparedness and Response Act of 2002*. In 2005, Rhode Island was 100% compliant for Community Water Systems that were required to comply with the federal regulation. In addition, we have encouraged smaller systems that do not fall under the Act to conduct Vulnerability Assessments and develop or refine their own Emergency Response Plans.

The Office of Drinking Water Quality maintains ongoing collaboration with the Environmental Protection Agency and numerous state, regional, national agencies and professional associations to remain on the forefront of current water security developments and practices. We also remain actively involved in the Rhode Island Department of Health initiative to achieve and maintain a coordinated departmental response capacity for public health emergencies.

Public Swimming Pools

Pubic Swimming Pools are defined as "All traditional swimming pools, wading pools, and therapeutic pools owned or maintained by any person, partnership, association, corporation, city or town or state, except swimming pools maintained by an individual for the sole use of his or her household and guest without charge for administration and not for the purpose of profit or in connection with any business operated for the purpose of profit and except also swimming pools owned and maintained by the United States."

HEALTH ensures that public swimming pools are constructed and operated in a safe and sanitary manner. Inspections of the filtering system, water quality and other sanitary and safety concerns are performed routinely. In 2005 there were 187 licensed indoor pools and 231 licensed outdoor (seasonal) pools for a total of 418 licensed swimming pools. There were 774 site visits, 1250 analysis for bacteria, residual chlorine and pH in which 9.6% bacterial samples, 15.7 % residual chlorine samples and 8.9 % pH samples were in violation of the regulations.

Bottled Water

Bottled water is a food product and as such is regulated by the Food and Drug Administration (FDA), which defines bottled water as "water that is intended for human consumption and that is sealed in bottles or other containers with no added ingredients except that it may optionally contain safe and suitable antimicrobial agents." Bottled water may come from several sources: artesian water\artesian well water, drinking water, mineral water, purified water, sparkling water, spring water or well water.

Bottled water must adhere to the FDA's Quality Standards, Standards of Identity (Labeling Regulations) and Good Manufacturing Practices. Quality Standards include the annual chemical analysis to determine what, if any, contaminants are in the water. Standards of Identity (Labeling Regulations) established standard definitions of terms found on bottled water labels. Good Manufacturing Practices govern such areas as plant and ground maintenance, sanitary maintenance of the building, fixtures and plumbing.

In 2005 there were 129 out of state licensed bottled water companies and 5 in state licensed bottled water companies. Prerequisites for obtaining a bottling permit are: submittal and approval of analytical data for the water source, label approval, satisfactory inspection reports and approval of a licensing application.

Private Wells

Funding Acquired to Implement Legislative Mandate

In 2005, the Office of Private Well Water Contamination (OPWWC) began the stakeholder process to formulate the regulations and guidance that will be associated with this program. The office's duties were amended by legislation passed by the Rhode Island General Assembly in 2002. This legislation can be reviewed at http://www.rilin.state.ri.us/Statutes/TITLE23/23-1/INDEX.HTM Sections 5.2 - 5.5 inclusive.

In related private well protection activities, HEALTH-Office of Drinking Water Quality (ODWQ) and University of Rhode Island (URI) Cooperative Extension's Home*A*syst program have continued to create and update the fact sheets. Thirty fact sheets are currently available for a broad spectrum of private well issues. These fact sheets can be reviewed at http://www.uri.edu/ce/wq/has/html/has_wellfacts.html. Additionally, this joint effort has been key in presenting the Private Well Water Protection Education Workshops. These workshops provide important information and education to private well owners on proper testing, treatment, and maintenance of their wells and drinking water supplies. Over the past year there have been 8 workshops that have been attended by over 240 state residents. Additional information and the future schedule can be seen at http://www.uri.edu/ce/wq/has/html/has_wellworkshopinfo.html.

Current funding has allowed for progress on all seven (7) mandated regulatory tasks. Conceptual frameworks for the regulations and guidance have been developed in conjunction with the stakeholder process. Working drafts of the regulations and guidance have been drafted, and are currently undergoing revision prior to distribution to the stakeholder advisory groups for review. Additional participation in the stakeholder process is welcome. Contact the Office if you wish to be included.

Operator Certification

The State's Operator Certification Board is comprised of seven members representing various stakeholders. The members of the Board are June A. Swallow, P.E. who is the designee of the Director of the Department of Health, Patrick Hughes, P.E., a registered professional engineer engaged in the practice of water supply engineering, Michael Covellone, an operator of a publicly owned water supply treatment facility in the State which has been recommended by the executive committee of the Rhode Island Water Works Association, Susan Licardi, a director of a water supply facility who has general supervisory authority for a water supply facility which has been recommended by the executive committee of the Rhode Island Water Works Association, Don Iannazzi, Esq. a representative of a labor union, Mario Carlino, a representative of business or industry, and Robert Bozikowski, a residential consumer of water.

The Board certifies the State's 500 treatment and distribution operators and provides ongoing review of regulations including documentation of new proposed policies. During 2005 the Board reviewed and responded to numerous public water system and/or operator inquiries and issued licenses to sixty-eight (68) of the ninety (99) individuals who applied to take certification exams.

Drinking Water State Revolving Fund

The Year 2005 saw DWSRF program momentum build with loans to the Pawtucket Water Supply Board ($31,909,000) and the Providence Water Supply Board ($8,101,000) finalized. HEALTH received confirmations from several public water systems of their intent to finance projects during the spring of 2005. Jamestown Water ($5,700,000), Lincoln Water Commission ($1,500,000) and Woonsocket Water ($4,000,000) have or are in the process of obtaining Certificates of Approval for various projects that are expected to begin construction between March and April 2006.

As of December 2005, Rhode Island had received a total of $67,517,700 representing its entire 1997 through 2004 federal capitalization grant awards. The State applied for its 2005 grant in the amount of $8,285,500 in June of 2006. Portions of the grants are being used to fund non-construction project activities essential to ensure the quality of the State's drinking water supplies.

Capacity Development

Capacity Development refers to the ability of a Public Water System to meet the present and future needs of its customers for safe and clean drinking water. This ability is measured in three areas, Technical, Managerial and Financial. Technical improvements are funded by loans through the Drinking Water State Revolving Fund (DWSRF). Managerial and Financial improvements are supported through technical assistance and training.

Capacity Development efforts have been focused on assisting small water systems make improvements to provide quality drinking water to their customers and to remain in compliance. In order to accomplish this, the Office of Drinking Water Quality has established contracts with Atlantic States Rural Water & Wastewater Association, New England Water Works Association, and the University of Rhode Island Cooperative Extension. These vendors provide: training to small water systems operators for certification; assistance with preparing the Consumer Confidence Report; educational programs for municipal officials and the general public concerning drinking water issues; and a Circuit Rider to troubleshoot targeted water systems. In 2005, a new contract with Resources for Communities And People (RCAP) was established. RCAP will assist targeted small water systems in developing Capital Improvement Plans and Operation & Maintenance Manuals. This contract will afford these systems the opportunity to not only achieve and maintain compliance but to provide quality drinking water to their consumers by improving their managerial and financial capacity.

Source Water Assessment Plan

This program has identified the potential threats to the quality of sources of public drinking water. We have printed assessment summaries for each system, which are available to the public through the water systems as well as through public libraries, municipalities and HEALTH.

Source assessment work continues in many ways. USGS is working (under contract with HEALTH) to improve recharge area delineations for various selected sources. URI will perform assessments on new source protection areas for large water suppliers as USGS completes their work. Land-use updates are necessary for the Waiver Program review, and are currently under way for Community and Non-transient, non-community wells. Finally, large water systems must update their assessments every five years under the Water Supply System Management Planning requirements of the RI Water

Resources Board; URI, HEALTH and DEM are working with WRB to assist large suppliers with their assessment updates.

Since land use control lies primarily with local government, HEALTH has contracted with the Cooperative Extension to conduct training workshops (under a contract in the Capacity Development program) to assist municipalities in incorporating the assessment results into their Comprehensive Community Plans.

Laboratory Services

The Rhode Island Department of Health continues to take an active role in assisting water systems with required water quality monitoring***. The Department of Health currently collects and analyzes water quality samples for almost all of the state's 483 public water systems***. The Department of Health Lab analyzed 4,488 samples, while the Office of Drinking Water Quality evaluated 25,266 samples. This testing not only ensures that each system complies with required monitoring, but more importantly, ensures the quality of the state's public drinking water.

Inspections

During 2005, the Department of Health, Office of Drinking Water Quality staff conducted Sanitary Survey inspections at 110 water systems serving a total of 415,764 people. These systems included 29 community water systems serving 395,896 people, 64 transient-non-community systems serving 12,156 people, and 17 non-transient, non-community systems serving 7,712 people.

Follow-up sanitary survey inspections were required at most all of these facilities to ensure that deficiencies were satisfactorily addressed. Additional inspections were conducted in direct response to requests for technical assistance from water systems. Survey personnel also performed conformance inspections of new construction or significant improvements in water system infrastructure.

DWQ inspection personnel used a portable GPS unit to determine or confirm the latitude and longitude of approximately 140 water system sources as required by EPA FRDS mandates.

Our goal is to perform a sanitary survey every three years for all community water systems and every five years for all other systems. Additional inspections are completed as necessary for systems that experience problems with water quality or capacity.

REGULATORY UPDATE

The Office of Drinking Water Quality regulates all public water systems in the state. This includes not only the major municipal water systems but also many other facilities such as schools, factories, restaurants, and day care centers, that have their own water supplies. During 2005, 483 public water systems were regulated by the Department of Health.

Federal Legislation/Regulations

The Safe Drinking Water Act Amendments of 1996 were signed on August 6, 1996. The passage of these Amendments is still bringing substantial changes to the drinking water program for water suppliers and the State, as well as greater protection and information to the public. New rule-makings stemming from the amendments are or will affect every water system in the state.

Arsenic Rule Takes Effect

On January 23, 2006, the provisions of the National Primary Drinking Water Regulations; Arsenic; Final Rule came into effect. The rule established a new MCL for Arsenic at 10 ppb.

Some early implementation requirements for the new Stage 2 Disinfectants and Disinfection Byproducts and Long-Term 2 Enhanced Surface Water Treatment Rules are also due in October of 2006. Two new comprehensive Surface Water Treatment Rule Quick Reference Guides are incorporated into this report.

Rhode Island Legislation/Regulations

Another responsibility of the Office of Drinking Water Quality is to implement several key pieces of legislation which have been passed by the Rhode Island General Assembly in recent years to enhance the protection of water supplies. These include the Comprehensive Clean Water Infrastructure Act, Water Projects Revolving Loan Fund Act, and the Board of Certification of Operators of Public Water Supply Facilities Act.

Beyond those programs falling under the jurisdiction of the Health Department, the Office of Drinking Water Quality is involved in many coordinated efforts and regularly participates in workgroups with local, state, and federal agencies and other organizations. Personnel from the Office hold positions on the Water Resources Board, Wastewater Operator Certification Board, and the Drinking Water Operator Certification Board. Office personnel review and comment on Water Supply Management Plans and Comprehensive Land Use Management Plans.

COMPLIANCE

The compliance data in this section is for calendar year 2005. The 2005 Annual Compliance Report summary table, as required by the Safe Drinking Water Act amendments of 1996, can be found in Appendix A at the end of this document.

During calendar year 2005, 88 violations of the Safe Drinking Water Act were reported by 67 of the State's 483 public water systems. Of these 88 violations, 60 were water quality violations, 14 were monitoring violations, five were treatment technique violations, 8 were Consumer Confidence Report (CCR) violations, and one was the result of a failure to provide public notification in response to a violation. A summary of the violations is presented below in Table 2.

Quality Violations

Quality violations occur when the monitoring results for a particular contaminant exceed the drinking water standard within a specific time period. Public water systems must monitor for 90 contaminants including inorganic compounds, volatile organic compounds, synthetic organic compounds, radionuclides, and pathogens. During 2005, 46 of the 483 public systems exceeded a drinking water standard for a total of 60 violations. Of those 60 violations, 56 were bacteriological violations, three were for total trihalomethanes (TTHMs), and one was for nitrate.

Monitoring Violations

Monitoring violations occur when a water system fails to perform the required monitoring for a particular contaminant within a specified time period. During 2005, 13 of the state's 483 water systems failed to perform the required monitoring within the specified time period. In all, 14 monitoring violations were reported.

Consumer Confidence Report (CCR) Violations

In 1998, EPA published a regulation/rule requiring community water systems to prepare and provide annual Consumer Confidence Reports concerning water quality to its consumers. In Rhode Island, there are 85 community water systems that are required to prepare and distribute copies of their CCR's to their consumers and to the State.

As the centerpiece of the public right to know provisions under the Safe Drinking Water Act, the CCR provides an annual snapshot of the local water quality, helps consumers understand how safe drinking water is delivered to their homes, and educate consumers about source water protection.

During 2005, a total of 8 violations were reported by 8 of the State's 85 community systems required to comply with the CCR Rule. Of the 8 violations, 8 systems received a major violation, in which the system failed to deliver the CCR to its consumers and/or the State by the July 1st deadline; 0 systems received a minor violation, in which the system failed to deliver the CCR Certification Letter to the State by the October 1st deadline and/or the content of CCR was inadequate.

Lead and Copper Violations

The Lead and Copper Rule (LCR) and minor revisions set specific requirements for monitoring, public education, corrosion control strategies, and treatment techniques to reduce lead and copper levels in our community and non-transient non-community public water systems.

In 2005, five out of 161 systems (just over 3%) exceeded the Action Level (AL) for lead, currently set at 0.015 ppm. Six systems (less than 4%) exceeded the AL for copper of 1.3 ppm. All of these systems are conducting studies and/or system modifications to control corrosion and comply with the LCR. Several violations were issued concerning improper or inadequate monitoring during 2005, mostly due to confusion over how the rule is to be implemented. All of these are taking action to move toward compliance.

Treatment of Surface Water

The Surface Water Treatment Rules (SWTR) established filtration and disinfection treatment requirements for the control of pathogens for all public water supplies that utilize surface water sources or ground water under the influence of surface water. The state of Rhode Island requires filtration for all systems that utilize surface water.

The Interim Enhanced Surface Water Treatment Rule (IESWTR) covers the five Rhode Island surface water systems that serve more than 10,000 people. The Long Term 1 Surface Water Treatment Rule (LT1SWTR) covers four systems that treat surface water and serve less than 10,000 people. Both rules build on the requirements of the SWTR, adding provisions that include 1) 2-log removal of cryptosporidium, 2) strengthened turbidity requirements (turbidity levels must be less than 0.3 NTU in at least 95% of the monthly measurements and no single reading may exceed 1 NTU), and 3) continuous individual filter monitoring. In 2005 the Pawtucket Water Supply Board had a violation of the turbidity requirements, resulting in a Tier 1 Violation and a boil order advisory that lasted 7 days.

The SWTR also requires 15 systems that are secondary sellers of surface water to maintain a chlorine residual throughout their distribution systems. All these systems complied with the SWTR requirement in 2005.

Reduction of Disinfection Byproducts (DBPs)

The Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DPBR) is the first of a staged set of rules that will reduce the allowable levels of DBP's in drinking water. In 2005, the twenty-five (25) community water systems that add a disinfectant to the water were regulated by this rule. Requirements include: 1) limiting residual disinfectant levels in the distribution system for chlorine to 4.0 mg/l and chlorine dioxide to 0.8 mg/l, 2) reducing the allowable levels of disinfection byproducts for Total Trihalomethanes to 0.080 mg/l, five Haloacetic Acids to 0.060 mg/l and chlorite to 1.0 mg/l and 3) setting minimum requirements for the removal of disinfection byproduct precursors (measured as Total Organic Carbon).

During 2005, three of these community public water systems failed to meet the requirements of the Stage 1 DPBR resulting in four MCL violations and two treatment technique violations. The US Naval Station's Fort Adams System and the Eleanor Slator Hospital- Zambarano Unit both received MCL violations for exceeding the standard for Total Trihalomethanes (TTHMs) in the third and fourth quarters. The Cumberland Water Department received two treatment technique violations for failing to meet the required removal of disinfection byproduct precursors in the first and second quarters.

Table 2: Violation Summary

VIOLATIONS FOR CALENDAR YEAR 2005	Number of Violations
Community (85 systems)	
Quality:	
Canonchet Cliffs Water Association, Inc. (TCR)	1
Castle Rock Condominiums (TCR)	1
Central Beach Fire District (TCR)	1
East Providence, City of (TCR)	2
Eleanor Slater/ Zambarano (TTHM)	2
Laurel Crest Housing (TCR)	1
Lawrence Sunset Cove Association (TCR)	1
Meadowlark, Inc. (TCR)	1
Narragansett Water Dept. - North End (TCR)	1
Narragansett Water Dept. - Pt. Judith (TCR)	1
Naval Station Newport (TCR)	1
North Kingstown, Town of (TCR)	2
Prudence Island Utility Corporation (TCR)	2
Slatersville Public Supply (TCR)	1
Split Rock Corporation (TCR)	2
Touisset Point Water Trust (TCR)	1
United States Navy – Fort Adams (TTHM)	1
University of Rhode Island (TCR)	1
Treatment Technique:	
Cumberland, Town of (DBPR)	3
Pawtucket, City of (IESWTR)	2
Monitoring:	
Lawrence Sunset Cove Association (TCR)	1
Scituate Commons (LCR)	1
Warwick, City of (TCR)	1
Consumer Confidence Report:	
Brandy Acres Water Supply	1
Hemlock Village	1
Heritage Park Home Cooperative	1
Mohegan Water Association, Inc.	1
North Tiverton Fire District	1
Richmond Water Supply Board	1
Split Rock Corporation	1
Tiverton Water Authority	1
Public Notification:	
East Providence, City of	1
Community Subtotal:	**40**
Non-Community Non-Transient (76 systems)	
Quality:	
Ashaway Elementary School (TCR)	1
Bruin Plastics Company, Inc. (TCR)	1
Burlingame Reservation – Main Camp – Legiontown (TCR)	1
Charbert, Inc. (MCL)	1
Greenwich Village Nursery School, Inc. (TCR)	1
Just For Kids, Inc. (TCR)	1
Nuweetooun School at Tomaquag Museum (TCR)	1
Pinewood Park School (TCR)	2
Monitoring:	
Crandal House (LCR)	1
West Look, Inc. (LCR)	1
Non-Community Non-Transient Subtotal:	**11**

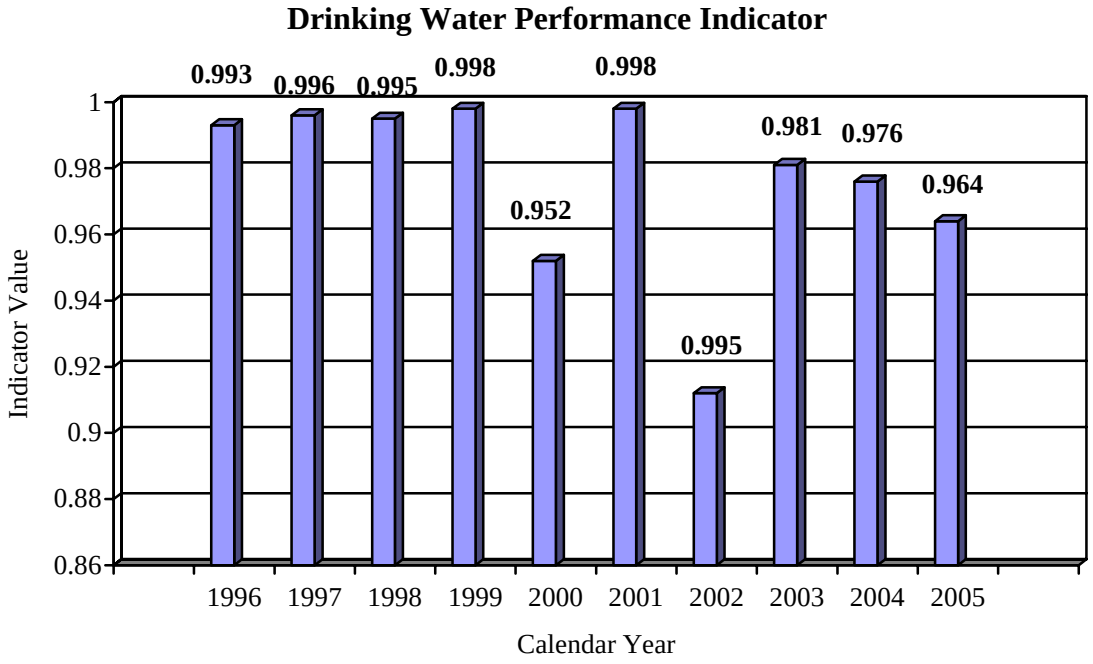
VIOLATIONS FOR CALENDAR YEAR 2005	Number of Violations
Transient Non-Community (322 systems)	
Quality:	
Bella Restaurant (TCR)	1
Bellevue House (TCR)	3
Country Chowder Shack (TCR)	1
Cumberland Farms #1142 (TCR)	1
Four Corners Grill (TCR)	1
Helen's Place (TCR)	1
Holiday Inn (TCR)	2
Holly Tree Camper Park, Inc. (TCR)	1
Lillymere Farms, Old Meeting House (TCR)	1
Melody Hill Golf Course (TCR)	3
Mobil Service Station #12005 (TCR)	1
Ninigret Park-Little Nini Pond (TCR)	1
Payne's New Harbor Dock (TCR)	2
Pinewood Park (TCR)	1
Shady Acres Restaurant, LLC (TCR)	2
St. Theresa Of the Child Jesus Church (TCR)	1
Townsmen Club, Inc. (TCR)	2
Westwood YMCA (TCR)	1
Windmill Hill Golf Course, Inc. (TCR)	1
Wolf Rock Country Kitchen, Inc. (TCR)	1
Monitoring:	
Camp Ayoho, Inc. (TCR)	1
Coventry Pines Golf Club (TCR)	1
Foster Country Club, Inc. (TCR)	1
Gentleman Farmer Restaurant (TCR)	1
Holiday Acres, Inc. (TCR)	1
Newport Boys & Girls Club Camp (TCR)	1
Ninigret Inn (TCR)	1
Stone House Club (TCR)	2
Transient Non-Community Subtotal:	**37**
Total Violations:	**88**

Notes: TCR – Total Coliform Rule
LCR – Lead and Copper Rule
MCL – Maximum Contaminant Level
DBPR – Disinfection Byproducts Rule
IESWTR – Interim Enhanced Surface Water Treatment Rule

OVERALL PERFORMANCE

Of all the requirements with which water systems are expected to comply, the most important is meeting minimum health standards. Each year, the Department of Health evaluates the progress of the State's individual water systems as well as Rhode Island's Drinking Water Program in meeting these minimum health standards. In making this evaluation, the Department of Health uses a "performance indicator value," based on compliance with Safe Drinking Water Act requirements for the entire year. The indicator value, shown below, is based on compliance with maximum contaminant levels (MCLs) and treatment technique requirements. To make the indicator more representative of the state's drinking water quality, it is weighted by the number of days the system operated in

compliance, the population served by the water system, and the total number of days that the system was actually in operation. An indicator value of 1.0 would mean that all public water systems were in compliance with every MCL and treatment technique requirement for the entire year.



$$\text{Indicator Value} = \frac{\Sigma\,(\text{PWS Population Served}) \times (\text{Days in Compliance With MCLs and Treatment Technique Requirements})}{\Sigma\,(\text{PWS Population Served}) \times (\text{Total Days in Operation})}$$

LOOKING AHEAD

The public demands drinking water of the highest quality feasible. As our analytical and technical capabilities become more sophisticated, the public's expectations increase. The continued provision of safe drinking water is becoming more expensive and technically more demanding. Public water systems will need to ensure adequate financial, technical, and managerial resources so that they will be able to continue providing water which meets these expectations.

The Department of Health will be administering several technical assistance contracts to assist water suppliers in their efforts to achieve this goal: activities included in these contracts are: general training of water suppliers, writing Consumer Confidence Reports for all systems serving less than 10,000 people, providing on-site technical or financial/managerial assistance, and providing training to municipal officials responsible for water systems and outreach to communities in their efforts to protect sources of drinking water.

Significant challenges for Rhode Island's water suppliers and the Department of Health during the coming year will be: continued implementation of the new Long-Term 2 Enhanced Surface Water Treatment Rule and the Stage 2 Disinfectants and Disinfection Byproducts Rule. We also plan to propose regulations for private well water quality and testing.

For the last several years, the Department of Health has been engaged in counter-terrorism planning. In the coming year, with continued funding from the Environmental Protection Agency and the Center for Disease Control, the Department of Health will provide training and technical assistance for water system emergency response planning and enhance many other aspects of the Office's emergency preparedness and response/prevention capabilities.

The public water systems in Rhode Island have maintained a very good record in providing high-quality, safe drinking water, but continued success will require renewed dedication. It will be an interesting and demanding year.

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DEPARTMENT OF HEALTH
Office of Drinking Water Quality

Appendix A

Compliance Table

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
	Organic Contaminants							
2981	**1,1,1-Trichloroethane**	**0.2**	**0**	**0**			**0**	**0**
2977	**1,1-Dichloroethylene**	**0.007**	**0**	**0**			**0**	**0**
2985	**1,1,2-Trichloroethane**	**.005**	**0**	**0**			**0**	**0**
2378	**1,2,4-Trichlorobenzene**	**.07**	**0**	**0**			**0**	**0**
2931	**1,2-Dibromo-3-chloropropane (DBCP)**	**0.0002**	**0**	**0**			**0**	**0**
2980	**1,2-Dichloroethane**	**0.005**	**0**	**0**			**0**	**0**
2983	**1,2-Dichloropropane**	**0.005**	**0**	**0**			**0**	**0**
2063	**2,3,7,8-TCDD (Dioxin)**	**$3x10^{-8}$**	**0**	**0**			**0**	**0**
2110	**2,4,5-TP**	**0.05**	**0**	**0**			**0**	**0**
2105	**2,4-D**	**0.07**	**0**	**0**			**0**	**0**

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
2051	Alachlor	0.002	0	0			0	0
2050	Atrazine	0.003	0	0			0	0
2990	Benzene	0.005	0	0			0	0
2306	Benzo[a]pyrene	0.0002	0	0			0	0
2046	Carbofuran	0.04	0	0			0	0
2982	Carbon tetrachloride	0.005	0	0			0	0
2959	Chlordane	0.002	0	0			0	0
2380	cis-1,2-Dichloroethylene	0.07	0	0			0	0
2031	Dalapon	0.2	0	0			0	0
2035	Di(2-ethylhexyl)adipate	0.4	0	0			0	0
2964	Dichloromethane	0.005	0	0			0	0
2041	Dinoseb	0.007	0	0			0	0

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
2032	Diquat	0.02	0	0			0	0
2033	Endothall	0.1	0	0			0	0
2005	Endrin	0.002	0	0			0	0
2257	Epichlorohydrin				0	0		
2992	Ethylbenzene	0.7	0	0			0	0
2946	Ethylene dibromide	0.00005	0	0			0	0
2034	Glyphosate	0.7	0	0			0	0
2065	Heptachlor	0.0004	0	0			0	0
2067	Heptachlor epoxide	0.0002	0	0			0	0
2274	Hexachlorobenzene	0.001	0	0			0	0
2042	Hexachlorocyclo-pentadiene	0.05	0	0			0	0

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
2010	Lindane	0.0002	0	0			0	0
2015	Methoxychlor	0.04	0	0			0	0
2989	Monochlorobenzene	0.1	0	0			0	0
2968	o-Dichlorobenzene	0.6	0	0			0	0
2969	para-Dichlorobenzene	0.075	0	0			0	0
2383	Total polychlorinated biphenyls	0.0005	0	0			0	0
2326	Pentachlorophenol	0.001	0	0			0	0
2987	Tetrachloroethylene	0.005	0	0			0	0
2996	Styrene	0.1	0	0			0	0
2991	Toluene	1.0	0	0			0	0
2979	trans-1,2-Dichloroethylene	0.1	0	0			0	0

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
2955	Xylenes (total)	10	0	0			0	0
2020	Toxaphene	0.003	0	0			0	0
2036	Oxamyl (Vydate)	0.2	0	0			0	0
2040	Picloram	0.5	0	0			0	0
2037	Simazine	0.004	0	0			0	0
2976	Vinyl chloride	0.002	0	0			0	0
	Subtotal		0	0			0	0
	Stage 1 Disinfectant Byproducts Rule							
1009	Chlorite	1.0	0	0			0	0
1011	Bromate	0.010	0	0			0	0
1006	Chloramines	4.0	0	0			0	0

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
1008	**Chlorine Dioxide**	**0.8**	**0**	**0**			**0**	**0**
0999	**Chlorine**	**4.0**	**0**	**0**			**0**	**0**
2950	**Total Trihalomethanes (Section 7.0 systems)**	**0.08**	**3**	**2**			**0**	**0**
2456	**Total Haloacetic Acids**	**0.06**	**0**	**0**			**0**	**0**
2920	**Total Oragnic Carbon Removal Ratio**	**1.0**			**3**	**1**	**0**	**0**
	Subtotal		**3**	**2**	**3**	**1**	**0**	**0**
	Inorganic Contaminants							
1074	**Antimony**	**0.006**	**0**	**0**			**0**	**0**
1005	**Arsenic**	**0.05**	**0**	**0**			**0**	**0**

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
1094	Asbestos (>10 micrometers)	7 million fibers/L	0	0			0	0
1010	Barium	2.0	0	0			0	0
1075	Beryllium	0.004	0	0			0	0
1015	Cadmium	0.005	0	0			0	0
1020	Chromium	0.1	0	0			0	0
1024	Cyanide (as free cyanide)	0.2	0	0			0	0
1025	Fluoride	4.0	0	0			0	0
1035	Mercury	0.002	0	0			0	0
1040	Nitrate	10	1	1			0	0
1041	Nitrite	1	0	0			0	0
1045	Selenium	0.05	0	0			0	0

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
1085	Thallium	0.002	0	0			0	0
1038	Total nitrate and nitrite	10 (as Nitrogen)	0	0			0	0
	Subtotal		1	1			0	0
	Radionuclide MCLs							
4000	Gross alpha	15 pCi/l	0	0			0	0
4010	Radium-226 and radium-228	5 pCi/l	0	0			0	0
4101	Gross beta	4 mrem/yr	0	0			0	0
	Subtotal		0	0			0	0
	Total Coliform Rule							
21	Acute MCL violation	Presence	6	5				

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
22	Non-acute MCL violation	Presence	50	39				
23,25	Major routine and follow up monitoring						11	10
75	Public Education						1	1
	Subtotal		56	44			12	11
	Surface Water Treatment Rule							
36	Monitoring, routine/repeat						0	0
41, 43, & 44	Treatment techniques				2	1		
	Unfiltered Systems							
31	Monitoring, routine/repeat						0	0

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
42	Failure to filter				0	0		
	Subtotal				2	1	0	0
	Lead and Copper Rule							
51	Initial lead and copper tap M/R		0	0			1	1
52	Follow-up or routine lead and copper tap M/R		0	0			2	2
58,62	Treatment Installation				0	0		
65	Public education						0	0
	Subtotal		0	0	0	0	3	3
	Consumer Confidence Reports (CCR)							

State: Rhode Island

Reporting Interval: January 1, 2005 through December 31, 2005

SDWIS Codes		MCL (mg/l)	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
			Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
71	CCR Complete failure to report (Major)						8	8
72	CCR Content Inadaquecy (Minor)						0	0
	Subtotal						8	8
Totals			60	46	5	2	23	22

Notes:

1. Values are in milligrams per liter (mg/l), unless otherwise specified.

Definitions for Appendix A (Compliance Table)

The following definitions apply to Appendix A (Compliance Table) above.

Filtered Systems: Water systems that have installed filtration treatment [40 CFR 141, Subpart H].

Inorganic Contaminants: Non-carbon-based compounds such as metals, nitrates, and asbestos. These contaminants are naturally-occurring in some water, but can get into water through farming, chemical manufacturing, and other human activities. EPA has established MCLs for 15 inorganic contaminants [40 CFR 141.62].

Lead and Copper Rule: This rule established national limits on lead and copper in drinking water [40 CFR 141.80-91]. Lead and copper corrosion pose various health risks when ingested at any level, and can enter drinking water from household pipes and plumbing fixtures. States report violations of the Lead and Copper Rule in the following six categories:

Initial lead and copper tap M/R: SDWIS Violation Code 51 indicates that a system did not meet initial lead and copper testing requirements, or failed to report the results of those tests to the State.

Follow-up or routine lead and copper tap M/R: SDWIS Violation Code 52 indicates that a system did not meet follow-up or routine lead and copper tap testing requirements, or failed to report the results.

Treatment installation: SDWIS Violation Codes 58 AND 62 indicate a failure to install optimal corrosion control treatment system (58) or source water treatment system (62) which would reduce lead and copper levels in water at the tap. [One number is to be reported for the sum of violations in these two categories].

Public education: SDWIS Violation Code 65 shows that a system did not provide required public education about reducing or avoiding lead intake from water.

Maximum Contaminant Level (MCL): The highest amount of a contaminant that EPA allows in drinking water. MCLs ensure that drinking water does not pose either a short-term or long-term health risk. MCLs are defined in milligrams per liter (parts per million) unless otherwise specified.

Monitoring: EPA specifies which water testing methods the water systems must use, and sets schedules for the frequency of testing. A water system that does not follow EPA's schedule or methodology is in violation [40 CFR 141].

States must report monitoring violations that are significant as determined by the EPA Administrator and in consultation with the States. For purposes of this report, significant monitoring violations are major violations and they occur when no samples are taken or no results are reported during a compliance period. A major monitoring violation for the surface water treatment rule occurs when at least 90% of the required samples are not taken or results are not reported during the compliance period.

Organic Contaminants: Carbon-based compounds, such as industrial solvents and pesticides. These contaminants generally get into water through runoff from cropland or discharge from factories. EPA has set legal limits on 54 organic contaminants that are to be reported [40 CFR 141.61].

Radionuclides: Radioactive particles which can occur naturally in water or result from human activity. EPA has set legal limits on four types of radionuclides: radium-226, radium-228, gross alpha, and beta particle/photon radioactivity [40 CFR 141]. Violations for these contaminants are to be reported using the following three categories:

Gross alpha: SDWIS Contaminant Code 4000 for alpha radiation above MCL of 15 picocuries/liter. Gross alpha includes radium-226 but excludes radon and uranium.

Combined radium-226 and radium-228: SDWIS Contaminant Code 4010 for combined radiation from these two isotopes above MCL of 5 pCi/L.

Gross beta: SDWIS Contaminant Code 4101 for beta particle and photon radioactivity from man-made radionuclides above 4 millirem/year.

Reporting Interval: The reporting interval for violations to be included in the first PWS Annual Compliance Report, which is to be submitted to EPA by January 1, 1998, is from July 1, 1996 through June 30, 1997. This interval will change for future annual reports. See guidance language for these intervals.

SDWIS Code: Specific numeric codes from the Safe Drinking Water Information System (SDWIS) have been assigned to each violation type included in this report. The violations to be reported include exceeding contaminant MCLs, failure to comply with treatment requirements, and failure to meet monitoring and reporting requirements. Four-digit SDWIS Contaminant Codes have also been included in the chart for specific MCL contaminants.

Surface Water Treatment Rule: The Surface Water Treatment Rule establishes criteria under which water systems supplied by surface water sources, or ground water sources under the direct influence of surface water, must filter and disinfect their water [40 CFR 141, Subpart H]. Violations of the "Surface Water Treatment Rule" are to be reported for the following four categories:

Monitoring, routine/repeat (for filtered systems): SDWIS Violation Code 36 indicates a system's failure to carry out required tests, or to report the results of those tests.

Treatment techniques (for filtered systems): SDWIS Violation Code 41 shows a system's failure to properly treat its water.

Monitoring, routine/repeat (for unfiltered systems): SDWIS Violation Code 31 indicates a system's failure to carry out required water tests, or to report the results of those tests.

Failure to filter (for unfiltered systems): SDWIS Violation Code 42 shows a system's failure to properly treat its water. Data for this violation code will be supplied to the States by EPA.

Total Coliform Rule (TCR): The Total Coliform Rule establishes regulations for microbiological contaminants in drinking water. These contaminants can cause short-term health problems. If no samples are collected during the one month compliance period, a significant monitoring violation occurs. States are to report four categories of violations:

Acute MCL violation: SDWIS Violation Code 21 indicates that the system found fecal coliform or E. coli, potentially harmful bacteria, in its water, thereby violating the rule.

Non-acute MCL violation: SDWIS Violation Code 22 indicates that the system found total coliform in samples of its water at a frequency or at a level that violates the rule. For systems collecting fewer than 40 samples per month, more than one positive sample for total coliform is a violation. For systems collecting 40 or more samples per month, more than 5% of the samples positive for total coliform is a violation.

Major routine and follow-up monitoring: SDWIS Violation Codes 23 AND 25 show that a system did not perform any monitoring. [One number is to be reported for the sum of violations in these two categories.]

Sanitary Survey: SDWIS Violation Code 28 indicates a major monitoring violation if a system fails to collect 5 routine monthly samples if sanitary survey is not performed.

Treatment Techniques: A water disinfection process that EPA requires instead of an MCL for contaminants that laboratories cannot adequately measure. Failure to meet other operational and system requirements under the Surface Water Treatment and the Lead and Copper Rules have also been included in this category of violation for purposes of this report.

Unfiltered Systems: Water systems that do not need to filter their water before disinfecting it because the source is very clean [40 CFR, Subpart H].

Violation: A failure to meet any state or federal drinking water regulation.